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AGRICULTURAL MEMORANDUM NO 502

Relationship between Return Date and Autumn Work Days

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It is assumed that each dry day in autumn before the soil has returned to capacity is a work day when allowance has been made for the following delay days after a wet spell.

Drainage

	Good	Moderate	Poor	Bad
September	0	½	1	1½
October	½	1	1½	2
November	1½	2	2½	3
December	2	2½	3	3½

It is then possible to count the available days between September 1st and the return date. This was done for Sprowston and Wimborne for 20 years.

The correlations between return dates and workdays for these stations were 0.92 and 0.94 respectively. Taking the means for good drainage for each return date the correlation becomes 0.99.

The simplest description of the effect of drainage (at this time of the year) is that each step down in drainage efficiency is equivalent to a 10% loss of available work days judged by the above model of delays.

Details are given in the tables.

It is therefore clear that a return date is a very efficient simple indicator of autumn work potential.

Any comments or suggestions on this paper should be referred to the author.

Meteorological Office
Bracknell

Return Date	Sprowston				Wimborne					Mean
	Available Work Days (Good drainage)									
S1	8				2					5
S2					6					6
S3					13					13
O1	18				15	17	12			16
O2					26½	23½				25
O3					33½	19½	24	29½	24	26
N1	21½	22			34	40	33½	36½	31½	31
N2	33	25	41		44½					36
N3	29½	39	36	34½						35
D1	42	40	53½	47 38½	52					45
D2			47½	49						48
D3	59½									59
J1										
J2	61½									62

Mean Available Work Days with poorer drainage

	Moderate	Poor	Bad Drainage
S1	5 (4.5)	4 (4.0)	3 (3.5)
S2	5 (5.4)	4 (4.8)	3 (4.2)
S3	12 (11.7)	10 (10.4)	8 (9.1)
O1	14 (14.4)	12 (12.8)	10 (11.2)
O2	22 (22.5)	19 (20)	16 (17.5)
O3	23 (23.4)	20 (20.8)	17 (18.2)
N1	27 (27.9)	24 (24.3)	21 (21.7)
N2	32 (32.4)	28 (28.8)	25 (25.2)
N3	29 (31.5)	25 (28)	21 (24.5)
D1	40 (40.5)	36 (36)	33 (31.5)
D2	45 (43.2)	41 (38.4)	38 (33.6)
D3	53 (53.1)	48 (47.2)	44 (41.3)
J1			
J2	55 (55.8)	49 (49.6)	43 (43.4)

(Figures in brackets indicate a 10% decrease for each deterioration step in drainage.)